Testimony

on

H.R. 4781

Marine Mammal Protection Act Amendments of 2002

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Oceanographers use sound in the sea for a wide variety of purposes, including, for example, assessing fish stocks, measuring ocean bathymetry, communicating underwater, transmitting data from autonomous instruments to the surface, navigating underwater, profiling ocean currents, and measuring large-scale ocean temperature variability. I believe that oceanographers will always depend on acoustic methods, for the fundamental reason that the ocean is largely transparent to sound, but opaque to light and radio waves. This means that all of the tasks for which we use light or radio waves in the atmosphere must be done using sound in the sea.

Although scientific use of sound in the ocean is a minor component of human-generated undersea sound (compared to shipping, for example), the current regulatory structure makes obtaining the necessary authorizations for conducting ocean acoustic research so arduous that it is having a chilling effect on the field (Fig. 1).

(Figure 1. XXXX)

Figure 1. Peter Worcester, North Pacific Acoustic Laboratory (NPAL) Principal Investigator, with the

environmental documentation prepared in the course of obtaining the authorizations needed to operate a low-frequency sound source off the north shore of Kauai to do a second phase of research on the feasibility and value of large-scale acoustic thermometry. Obtaining the required authorizations took nearly three years and cost in excess of half a million dollars.

There are several laws that are relevant to the use of sound in the sea, most notably the National Environmental Policy Act (NEPA), the Marine Mammal Protection Act (MMPA), and the Endangered Species Act (ESA). I will focus my comments in this testimony on H.R. 4781, the Marine Mammal Protection Act Amendments of 2002.

The impact of the existing regulatory structure on marine research been discussed in a number of contexts, including two recent National Research Council reports:

> National Research Council (NRC). 1994. *Low-Frequency Sound and Marine Mammals: Current Knowledge and Research Needs*. National Academy Press, Washington, D.C.
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> National Research Council (NRC). 2000. *Marine Mammals and Low-Frequency Sound: Progress Since 1994*. National Academy Press, Washington, D.C.

Although I am not in agreement with all of the conclusions in these reports, they provide an important service in considering how the MMPA could be modified "for facilitating valuable research while maintaining all necessary protection for marine mammals." (NRC, 1994)

Scientific Research Permits

The MMPA currently provides a relatively streamlined permit procedure for scientific research “on or directly benefiting marine mammals.” Any other scientific research falls under the Incidental Harassment Authorization (IHA) procedure or the lengthy rule-making procedure leading to a Letter of Authorization (LOA). NRC (1994) recommends that the regulatory structure be altered to:

- Broaden the definition of research for which scientific permits can be issued to include research activities beyond those "on or directly benefiting marine mammals." The population status of the species and the kind of "take" should determine the number of allowable takes, and the same regulations should apply equally to all seafaring activities.

NRC (2000) similarly states that "the MMPA and NMFS regulations should include acoustic studies in the regulatory procedures related to approvals for harassment during scientific research."

Although broadening the definition of research for which scientific permits can be issued would be an important step toward helping facilitate valuable marine research, the existing procedures for obtaining Scientific Research Permits are still quite burdensome for individual researchers. The procedures should be further simplified and streamlined. NRC (1994) concurs, stating that "the lengthy and unpredictable duration of this process can create serious difficulties for research." One possible approach to streamlining the SRP process is to decentralize permitting authority to regional offices or committees. NRC (1994) suggests one method for doing so:

- Consider transferring some aspects of the regulatory process to less centralized authorities

> patterned after the IACUCs [Institutional Animal Care and Use Committees] that regulate animal care and safety in the academic and industrial settings.

Decentralization would help avoid the time delays associated with any process centered in Washington, D.C.

Definition of Level B Acoustic Harassment

The 1994 amendments to the MMPA included a definition of harassment as "any act of pursuit, torment, or annoyance which:

> Level A—has the potential to injure a marine mammal or marine mammal stock in the wild; or
> Level B—has the potential to disturb a marine mammal or marine mammal stock in the wild by causing disruption of behavioral patterns, including, but not limited to, migration, breathing, nursing, breeding, feeding, or sheltering."

This definition of harassment in the MMPA is unfortunately somewhat ambiguous and has in the past been interpreted at times to mean that any detectable change in behavior constitutes harassment. NRC (1994) notes that as "researchers develop more sophisticated methods for measuring the behavior and physiology of marine mammals in the field (e.g., via telemetry), it is likely that detectable reactions, however minor and brief, will be documented at lower and lower received levels of human-made sound." NRC (2000) concludes that it "does not make sense to regulate minor changes in behavior having no adverse impact; rather, regulations must focus on significant disruption of behaviors critical to survival and reproduction." NRC (2000) suggests that Level B harassment be redefined as follows:

> "Level B—has the potential to disturb a marine mammal or marine mammal stock in the wild by causing meaningful disruption of biologically significant activities, including, but not limited to, migration, breeding, care of young, predator avoidance or defense, and feeding."

The National Marine Fisheries Service recently stated that it "considers a Level B harassment taking to have occurred if the marine mammal has a significant behavioral response in a biologically important behavior or activity." ("Taking and Importing Marine Mammals; Taking Marine Mammals Incidental to Operation of a Low Frequency Sound Source by the North Pacific Acoustic Laboratory; Final Rule," **Federal Register,** Vol. 66, No. 160, Friday, August 17, 2001, Rules and Regulations, p. **43442.)** This is close to the definition recommended by NRC (2000). Nonetheless, it would be helpful for a revised definition of Level B harassment to be codified in the MMPA, focusing on the significant disruption of behaviors critical to survival and reproduction.

Categorical Exemptions

As noted above, underwater sound is routinely used by oceanographers for a wide variety of important purposes. The MMPA does not seem to have anticipated that the provisions of the act might be applied to instrumentation that is in wide-spread and on-going use, and it does not include a mechanism for allowing for such on-going uses other than through exemptions that must be applied for on a case-by-case basis. The National Marine Fisheries Service should clarify its position on the use of a wide variety of routinely used sound sources, and/or the act needs to be modified to provide for the issuance of categorical exclusions allowing for the use of instrumentation that has the potential for taking by harassment in situations in which the taking will be unintentional and will have a negligible impact on the affected species and stocks. NMFS

should be tasked with issuing regulations providing categorical exclusions for uses of sound that meet appropriate criteria. Such regulations could include provisions excluding critical habitat from the categorical exclusions, if appropriate.

Conclusions

Both marine mammals and people use sound in the sea for a wide variety of purposes. The suggestions provided above are intended to facilitate the constructive use of sound in the sea, while providing all appropriate protections for marine mammals.

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